INTERMOUNTAIN STATES (R-4)

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CONDITIONS IN BRIEF

Bark beetles remain the most destructive insects in the Intermountain Region. The mountain pine beetle in lodgepole pine, down in extent from last year, remains epidemic in portions of southern Idaho and western Wyoming. The most destructive outbreak is in the Targhee National Forest where upwards of 218,000 standing trees were chemically sprayed to reduce losses in an existing timber sale area. In adjacent Yellowstone and Grand Teton National Parks, epidemic conditions continue. Tree losses increased again this year on both divisions of the Bridger National Forest. Less extensive infestations of potential either developed anew or already existed in other parts of southern Idaho and Utah. Mortality in ponderosa pine by this beetle remained at about the same level as last year.

The Douglas-fir beetle, already at a high level, increased even further in 1970. Tree killing of serious proportions continued in southern Idaho with heaviest losses occurring on the Boise, Payette, and Sawtooth National Forests. Because the infestation is so widespread, control is not feasible.

Defoliators and other insects were less of a problem this year The spruce budworm remained epidemic on the Payette and Bridger Forests but no tree killing occurred. Damage to Douglas-fir by the Douglas-fir tussock moth increased significantly in southwestern Idaho, while defoliation of lodgepole pine by the sugar pine tortrix dropped to a low level.

STATUS OF INSECTS

Mountain pine beetle, Dendroctonus ponderosae Hopk. continues to deplete the lodgepole pine forests of the Intermountain Region, but well under the high level of recent years. The single most serious infestation at this time is on the Targhee Forest in Idaho and Wyoming and in Yellowstone Park, Wyoming. This infestation continues to exert tremendous pressure on the Warm River Timber Sale where a persistent three-year suppression effort has kept tree mortality at a tolerable level. This year over 218,000 trees were individually treated on 120,000 acres. This same number of trees is expected to be treated in 1971. Plans are to remove 150 MM board feet of timber from this area in a five-year period. South of the sale area, the infestation has slowed down due to lack of host material, but to the east in Yellowstone Park tree killing continues at an accelerated rate.

On the opposite side of the divide, in Wyoming, different conditions exist. The once damaging infestation on the Teton National Forest has almost completely subsided, but in adjoining Grand Teton Park, epidemic conditions continue. The Park is now experiencing a resurgence of beetle activity following the early termination of suppression efforts in 1967. On the Bridger Forest, in both the Wyoming and Bridger Divisions, the beetle continues to push southward into uninfested stands. Logging in and ahead of the infestations to salvage infested trees and those ultim tely threatened is the onl feasible method of control.

In southern Idaho, on the Payette and Sawtooth Forests, several new infestation centers in lodgepole pine stands were detected. A resurgence of tree killing is occurring on state and private lands south of McCall, Idaho. Widely scattered outbreaks of varying intensities continue on portions of the Caribou National Forest, Idaho; Cache National Forest, Idaho and Utah; and the Ashley and Wasatch National Forests, Utah.

On a far lesser scale, tree killing of ponderosa pine continues in widely separated locales. The long-standing infestation in second-growth stands on state and private holdings east of Cascade, Idaho, continues to spread, but has yet to reach National Forest lands. Concern is for esthetic and recreation values in Bryce Canyon National Park and Flaming Gorge National Recreation Area, Utah, where scattered mortality of mature and overmature timber continues. In Bryce Canyon the situation is considerably more serious for most of the epidemic centers are visible from the main highway.

Douglas-fir beetle, Dendroctonus pseudotsugae Hopk. The serious infestation that was triggered by winter storm damage throughout southern Idaho more than five years ago, showed no indication of subsiding. Tree killing of severe proportions has occurred in portions of the Boise, Payette, and Sawtooth Forests, and to a lesser extent on the Challis and Salmon National Forests, Idaho. The infestation is so widespread that control by means other than natural means is simply not possible. The only alternative is to salvage as much of the dead and dying timber as possible.

Winter storms in 1968-69, caused widespread damage which provided favorable breeding material for the beetle on the Ashton District, Targhee Forest, Idaho. Although it is known that some of the debris produced broods, the extent of standing tree attacks will not become evident until spring of 1971.

Regional personnel in cooperation with Boyce-Thompson Institute, conducted a study to test the attractiveness of a synthetic pheremone, frontalin, to inflight beetle populations. All baited trees were attacked as were most of the nearby unbaited trees. Only 8 percent of the check trees were attacked. In this respect, the project was deemed an unqualified success. The problem now is to develop new methods of testing that will qualify this attractant as a practical survey or control tool.

Spruce budworm (western species), Choristoneura occidentalis Free. Of the visible spruce budworm infestations in the Region, only those on the Payette Forest, Idaho, and Bridger Forest, Wyoming, are of concern. Infestation boundaries widened on the Payette Forest but decreased on the Bridger Forest. Feeding activity in both infestations was, for the most part, light to moderate with some heavy defoliation occurring in very local are s. Egg mass surveys, however, indicate increases in both intensity and extent of these infestations in 1971. No control is planned.

Engelmann spruce beetle, Dendroctonus rufipennis (Kirby), damage is widely separated and confined to high elevation spruce stands in the northern part of the Region. Most of the outbreaks resulted from storm and avalanche damage. The heaviest concentration of active beetle activity is in the upper reaches of Huntington Creek, Manti-LaSal National Forest, Utah. Some logging is now underway to salvage some of the dead and dying timber in the Hilgard Mountain infestation, Fishlake National Forest, Utah.

Roundheaded pine beetle, Dendroctonus adjunctus Blandf. continues its slow but steady attrition of mature and overmature ponderosa pine on the Las Vegas Ranger District, Toiyabe National Forest, Nevada. Efforts have been made to reduce tree killing in summer home and recreation areas by felling and spraying or removing infested trees, but the infestation is too widespread to achieve anything but very local control.

Douglas-fir tussock moth, Hemerocampa pseudotsugata McD. populations continue to fluctuate in mature Douglas-fir stands on BLM, state and private lands in Owyhee County, Idaho. Natural factors which held the population in check for the past two years failed to prevent a sudden increase this year. Heavy to complete defoliation occurred in several localized outbreaks southwest of Silver City. Relatively heavy egg deposition indicates heavy defoliation in 1971.

Sugar pine tortrix, Choristoneura lambertiana (Busck.) damage is at its lowest level in several years. Only one infestation was visible from the air and that was in pole-size lodgepole pine on the Targhee Forest, Idaho.

A blotch miner, Lithocolletis sp. Heavy populations of this minute insect caused premature defoliation of Fremont cottonwood in Zion National Park, Utah. Detailed observations show that this leaf miner has two generations a year. Efforts are now in progress to learn something of this insect's life history and habits.

Pinyon needle scale, Matsucoccus acalyptus Herb. A mild winter presumably was partly responsible for triggering long-time endemic populations of this scale in widely separated locales of Nevada. Moderate to heavy defoliation to Christmas tree size pinyon pine occurred in localized outbreaks on the Humboldt and Toiyabe National Forests. Control was not undertaken.

Other insects.

A weevil, Pissodes terminalis Hopp. continues to kill terminal leaders of lodgepole pine reproduction in widely separated areas in the Region. Damage to standing trees by the pine engraver, Ips pini (Say) is at its lowest level in years. A leaf miner, Argyresthia sp., new sp., caused heavy defoliation of incense cedar near Lake Tahoe, Nevada. An increase in the sighting of pine butterfly, Neophasia menapia (Feld. & Feld.), moths in portions of the Boise and Payette Forests may indicate an upswing in feeding damage in 1971. For the first time in six years, populations of a tent caterpillar, Malacosoma incurvum discoloratum (Neumoegen) on Fremont cottonwood in Zion Park, Utah, were low enough that they did not require control. Widely scattered tree killing of ponderosa pine by the western pine beetle, Dendroctonus brevicomis LeC., continues in two areas on the Dixie National Forest, Utah. Gambel oak along the Wasatch Front, Utah, was only lightly defoliated by a looper, Lambdina punctata (Hulst.). Box elder was heavily defoliated by Archips negundanus Dyar in portions of northern Utah and southern Idaho.

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1			July 1970	Targhee NF.	Storms during winter 1968-69 seriously damaged this Douglas-fir stand on the Targhee Forest and made it susceptible to bark beetle attacks.
2			July 1970	Laboratory	Larva of a blotch miner, Lithocolletis sp., a defoliator of Fremont cottonwood.